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AGILENT TECHNOLOGIES, INC. INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT. P.O. BOX 7599 M/S DL429			WEST, JEFFREY R		
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Please find below and/or attached an Office communication concerning this application or proceeding.

			NA)		
		Application No.	Applicant(s)		
		09/686,663	ALEXANDER, JAY A.		
•	Office Action Summary	Examiner	Art Unit		
		Jeffrey R. West	2857		
Period fo	The MAILING DATE of this communication apports or Reply	pears on the cover sheet with	the correspondence address		
THE - Exte after - If the - If NO - Failt Any	MAILING DATE OF THIS COMMUNICATION. ensions of time may be available under the provisions of 37 CFR 1.1 r SIX (6) MONTHS from the mailing date of this communication. e period for reply specified above is less than thirty (30) days, a repl or period for reply is specified above, the maximum statutory period for the toreply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	136(a). In no event, however, may a reply within the statutory minimum of thirty (will apply and will expire SIX (6) MONTHe, cause the application to become ABAN	y be timely filed 30) days will be considered timely. S from the mailing date of this communication. IDONED (35 U.S.C. § 133).		
Status					
1)⊠	Responsive to communication(s) filed on 10 Ju	<u>une 2005</u> .			
2a)⊠	This action is FINAL . 2b) This action is non-final.				
3)	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is				
	closed in accordance with the practice under E	Ex parte Quayle, 1935 C.D. 1	1, 453 O.G. 213.		
Disposit	ion of Claims		•		
5)□ 6)⊠ 7)□	Claim(s) 1-29,44-49,51 and 53-66 is/are pendid 4a) Of the above claim(s) is/are withdray Claim(s) is/are allowed. Claim(s) 1-29,44-49,51 and 53-66 is/are reject Claim(s) is/are objected to. Claim(s) are subject to restriction and/or	wn from consideration.			
Applicat	ion Papers				
10)⊠	The specification is objected to by the Examine The drawing(s) filed on <u>30 September 2004</u> is/s Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct The oath or declaration is objected to by the Ex	are: a) \square accepted or b) \square of drawing(s) be held in abeyance tion is required if the drawing(s)	e. See 37 CFR 1.85(a). is objected to. See 37 CFR 1.121(d).		
Priority (under 35 U.S.C. § 119				
12)□ a)	Acknowledgment is made of a claim for foreign All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority application from the International Bureau See the attached detailed Office action for a list	ts have been received. ts have been received in App rity documents have been re u (PCT Rule 17.2(a)).	olication No ceived in this National Stage		
Attachmer	nt(s)				
1) 🔯 Notic	ce of References Cited (PTO-892)	4) Interview Sun			
3) 🔲 Infor	ce of Draftsperson's Patent Drawing Review (PTO-948) mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) er No(s)/Mail Date		Mail Date rmal Patent Application (PTO-152)		

DETAILED ACTION

Claim Objections

Claims 22 and 66 are objected to because of the following informalities:
 In claim 22, lines 3-4, "each specified transition percentage" should be ---

specified transition percentages---.

In claim 66, line 10, to avoid problems of antecedent basis, "and measurement statistics" should be ---and the at least one measurement statistic---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

- 2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 3. Claim 66 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 66 is considered to be vague and indefinite because it recites, "generate at least one measurement statistic for the particular pulse measurement type, wherein the at least one measurement statistic is generated using the generated pulse measurements of the particular pulse measurement type for at least some of the plurality of pulses; and store the generated pulse measurement results and measurement statistics in a searchable data structure."

This limitation is first considered to be vague an indefinite because it the term "some" is considered to be relative, which renders the claim indefinite. The term "some" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention since "some" is commonly used to refer to a wide variety of numbers in the art.

This limitation is also considered to be vague and indefinite because it refers to "the generated pulse measurement results" without a previous mention of any "generated pulse measurement results" only "at least one pulse measurement", "generated pulse measurements" and "at least one measurement statistic for the particular pulse measurement type". Therefore, it is unclear to one having ordinary skill in the art whether the "generated pulse measurement results" refers to the generated pulse measurements or to some other result based on the generated pulse measurements.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 5. Claim 66, as may best be understood, is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,495,168 to de Vries

De Vries discloses a signal measurement system comprising a pulse management system configured to automatically generate at least one pulse measurement of a particular pulse measurement type (i.e. amplitudes) (column 3, lines 9-14 and 35-40) for each of a plurality of pulses in a time-varying analog signal stored in an acquisition memory (column 2, lines 53-67), generate at least one measurement statistic (i.e. global max and min) for the particular pulse measurement type (column 3, lines 51-53), wherein the at least one measurement statistic is generated using the generated pulse measurements of the particular pulse measurement type for at least some of the plurality of pulses, and store the generated pulse measurement results and measurement statistics in a searchable data structure (column 3, lines 1-4).

Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 7. Claims 1-3, 9, 11, 22, 24, 25, 44, 57, and 60-65 are rejected under 35
 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,222,028 to LaBarre et al. in view of U.S. Patent No. 6,598,224 to Maeda et al.

LaBarre discloses a pulse analysis/management system, including a digital oscilloscope (column 6, lines 54-58) that obtains a time-varying analog pulse signal (column 3, lines 67-68), digitizes and stores the samples in an acquisition memory during a single acquisition (column 7, lines 7-16 and 24-29) and automatically/without operator involvement provides measured characteristics of each of the previously stored plurality of pulses for storage in a searchable data storage array, suitable for an implementing application (column 9, lines 44-52), using positive and negative pulse time indications (column 11, lines 33-38). LaBarre also discloses a transition calculator that determines operator-provided transition signal levels and times at each of one or more transition percentages, wherein each percentage is a percentage of a difference between two signal levels (top and base) having a logical interpretation for comparison (column 9, line 52 to column 10, line 9 and column 12, lines 60-66).

LaBarre also discloses that the measured characteristics stored in a searchable data storage array comprise results of pulse measurements taken of each of the plurality of pulses (i.e. voltage) (column 4, lines 34-49) as well as pulse global measurement statistics comprising results of statistical analyses (i.e. mean) of at least one of the pulse measurements (i.e. DC offset) (column 7, line 61 to column 8, line 6).

LaBarre also discloses storing a plurality of measurement characteristics in a searchable array, in response to the acquisition memory storing the acquired signal (column 9, lines 41-45 and column 12, lines 47-66), that is accessed by a user

entering a particular pulse number (column 4, lines 7-11) as well as presenting the pulse characteristics in a signal pulses data table that comprises a pulse identifier identifying each pulse of the acquired signal as a relative occurrence with respect to the other pulses in the sequence in which they occur (i.e. sequential pulse numbers) and a plurality of pulse measurement results associated with each said pulse identifier (column 4, TABLEs 1 and 2).

LaBarre also discloses populating the data structure with pulse measurement data in accordance with measurement parameters provided by an operator through a user interface (column 4, lines 7-11 and 50-53).

As noted above, the invention of LaBarre teaches many of the features of the claimed invention and while the invention of LaBarre does teach storing a plurality of measurement characteristics in a searchable array (column 9, lines 41-45 and column 12, lines 47-66) that is accessed by a user entering a particular pulse number (column 4, lines 7-11) as well as presenting the pulse characteristics in a signal pulses data table that comprises a pulse identifier identifying each pulse of the acquired signal as a relative occurrence with respect to the other pulses in the sequence in which they occur (i.e. sequential pulse numbers) and a plurality of pulse measurement results associated with each said pulse identifier (column 4, TABLEs 1 and 2), LaBarre does not explicitly indicate that the data is stored in the memory in this form.

Maeda teaches a data management unit, computer system and computerreadable storage medium comprising means for storing a plurality of types of data

including identifiers for a data number, data type, data name, and associated data parameters in the form of a chart in memory (column 11, lines 27-31 and Figure 6).

It would have been obvious to one having ordinary skill in the art to modify the invention of LaBarre to specifically indicate that data in the tables of LaBarre is stored in a memory because Maeda suggests a well-known data structure that would present data in a clear and concise manner for easy access and/or display by the user (column 2, lines 38-46, column 11, lines 27-31 and column 12, lines 8-18).

8. Claims 4-6, 8, 10, 12-17, 19-21, 26-28, 49, 53-56, and 59, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over LaBarre in view of Maeda and further in view of U.S. Patent No. 5,003,248 to Johnson.

As noted above, the invention of LaBarre and Maeda teaches many of the features of the claimed invention and while the invention of LaBarre and Maeda does teach a basic pulse analysis system, the combination does not specifically include a means for further analyzing the pulses according to a calculated histogram.

Johnson discloses a probability density histogram display for use as a pulse management system including a digital oscilloscope that obtains an analog timevarying pulse signal, buffers and applies the signal to a sampling bridge that samples the input signal in a single acquisition and measures a voltage characteristic of each of the pulses in series before passing the voltage value to a

holding circuit and an ADC that digitizes the voltage levels and stores the digitized voltage samples in a memory with each sample uniquely identified by a single digital word identifier (column 3, lines 19-31). Johnson then discloses a means for automatically (without user involvement) using the previously obtained/stored values to form a histogram (column 3, lines 31-37) of a distribution of the number of occurrences that the acquired signal is obtained over a specified time range (column 1, lines 63-68).

Johnson discloses a means for determining one or more modes of the histogram that has a logical interpretation (i.e. digital values stored in the memory indicating the number of occurrences) indicating which signal levels occur most frequently in the histogram (column 4, lines 17-24).

Johnson discloses a transition calculator/data analyzer for determining/measuring the transition signal levels and times at one or more transition percentages, including base and top levels of the pulses, at user-defined and/or 10%, 50%, and 90% levels (column 1, lines 34-45, column 2, line 42, and column 4, lines 24-30) through a user interface (column 3, lines 13-15). Johnson also discloses that the memory holding the voltage values is searchable in that the values are searched to determine if a particular amplitude meets a predetermined threshold percentage wherein if the predetermined threshold is reached, the amplitude occurrence is displayed (column 4, lines 34-44).

Johnson also discloses using the method to analyze, and store data from, a plurality of input channels each with corresponding graphs of user-selected pulse

waveforms on a single display (column 3, lines 51-54). Figure 4 of Johnson discloses a sine wave in a time-domain having two signal levels producing a corresponding histogram with two peaks "200A" (i.e. bimodal). Further, since the invention of Johnson teaches displaying a plurality of data graphs corresponding to a plurality of input sources, wherein the histogram display for each source is optional (abstract) it is considered inherent that the source must provide some type of measurement parameter based on a user indicating to the processing system memory that the histogram is to be calculated and displayed. Johnson also discloses displaying the results of the predetermined and operator defined statistical mode, probability value, and percentage measurements (i.e. operator defined distal and proximal percentage levels) (column 2, line 42 and column 4, lines 17-44).

Johnson also discloses storing the pulse data as a single digital word data unit in a buffer/database/array (column 3, lines 38-50), having use in implementing oscilloscope applications, wherein the single data unit uniquely identifies each pulse of the acquired signal, the measured amplitude of the pulse, as well as the corresponding time of occurrence with respect to the other pulses indicating the time corresponding to when a (rising-edge) trigger event caused the storage of the signal (column 5, lines 21-30).

Johnson also discloses that the pulse data and digital word identifiers are automatically stored in a sequential order of occurrence in the buffer in response to the initial sampling and conversion of the input signal (column 3, lines 38-50).

It would have been obvious to on having ordinary skill in the art to modify the invention of LaBarre and Maeda to specifically include a means for further analyzing the pulses according to a calculated histogram, as taught by Johnson, because, as suggested by Johnson, the combination would have improved the pulse analysis by providing means for determining the frequency of occurrence of amplitude levels thereby allowing the processing of the pulses for timing analysis (column 1, lines 29-45).

With respect to claim 17, the limitation requiring that the acquired signal be an alternative mark inversion communication signal that transitions between three signal values, is considered to be an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In the instant case, the structure of LaBarre, Johnson, and Maeda is capable of analyzing an alternative mark inversion communication input signal. Therefore, as understood by one having ordinary skill in the art, and admitted by Applicant on page 27, lines 29-30, the mode finder of LaBarre, Johnson, and Maeda would identify all the modes of the histogram corresponding to the acquired signal, such as three modes for an alternative mark inversions signal. Further, it is considered inherent that that an alternate mark

inversion signal transitions between three signal values (see the supplied definition AMI).

9. Claims 7, 23, 29, 45-48, 51, and 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over LaBarre in view of Maeda and Johnson and further in view of U.S. Patent No. 3,656,060 to Bauernfeind et al.

As noted above, LaBarre in combination with Maeda and Johnson teaches all the features of the claimed invention except for specifying that the type of pulses (i.e. positive or negative) be inputted before processing.

Bauernfeind teaches a time interval measuring and accumulating device, such as an oscilloscope (column 1, lines 7-9), wherein the user of the oscilloscope specifies the input pulses as either positive or negative pulses before pulse processing occurs (column 2, lines 45-47).

It would have been obvious to one having ordinary skill in the art to modify the invention of LaBarre, Maeda, and Johnson to include specifying that the type pulse (i.e. positive or negative) be inputted before processing because Johnson does teach sampling the input data based upon a rising edge of each pulse of the sample clock, and Bauernfeind suggests that the combination would have insured correct counting of a plurality of pulses, such as counting the occurrences of pulses for use in the histogram of LaBarre, Maeda, and Johnson, by defining the initialization of the count to occur on the leading or trailing edge as required, as well as allowed for

proper triggering and detection of the pulses as known in the art (column 1, lines 30-60).

Further, with respect to claim 58 since the invention of LaBarre, Maeda, and Johnson discloses storing a plurality of measurement data with a corresponding pulse identifier and Bauernfeind teaches obtaining a pulse type data for each pulse, the combination would have stored a pulse type data unit along with the pulse identifier for each pulse.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over LaBarre in view of Maeda and Johnson and further in view of U.S. Patent No. 5,410,617 to Kidd et al.

As noted above, the invention of LaBarre in combination with Maeda and Johnson teaches all the features of the claimed invention except for including a smoothing function to identify any of the one or more modes of the histogram.

Kidd teaches a method for adaptively thresholding grayscale image data by obtaining the image data and mapping the data in a histogram, using a look-up table, and incorporating a smoothing function (column 8, lines 37-54) to find peaks in the histogram (column 9, lines 13-15).

It would have been obvious to one having ordinary skill in the art to modify the invention of LaBarre, Maeda, and Johnson to include a smoothing function to identify any of the one or more modes of the histogram, as taught by Kidd, because LaBarre, Maeda, and Johnson does teach that the peaks of the histogram

correspond to the modes of the histogram and Kidd suggests that the combination would have provided better peak/mode detection by removing very small peaks and rapid excursions in the histogram (column 8, lines 64-65).

11. Claim 66, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over LaBarre et al. in view of Maeda et al. and further in view of U.S. Patent No. 5,495,168 to de Vries.

As noted above, the invention of LaBarre and Maeda teaches many of the features of the claimed invention and while the invention of LaBarre and Maeda does teach generating at least one measurement statistic for a particular pulse, the combination does not explicitly state that the measurement statistic is determined using at least some of the plurality of pulses.

De Vries discloses a signal measurement system comprising a pulse management system configured to automatically generate at least one pulse measurement of a particular pulse measurement type (i.e. amplitudes) (column 3, lines 9-14 and 35-40) for each of a plurality of pulses in a time-varying analog signal stored in an acquisition memory (column 2, lines 53-67), generate at least one measurement statistic (i.e. global max and min) for the particular pulse measurement type (column 3, lines 51-53), wherein the at least one measurement statistic is generated using the generated pulse measurements of the particular pulse measurement type for at least some of the plurality of pulses, and store the

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generated pulse measurement results and measurement statistics in a searchable data structure (column 3, lines 1-4).

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It would have been obvious to one having ordinary skill in the art to modify the invention of LaBarre and Maeda to explicitly state that the measurement statistic is determined using at least some of the plurality of pulses, as taught by De Vries, because, De Vries suggests that the combination would have provided means for optimizing the pulse measurement signal conditioning and scaling to improve the overall pulse analysis (column 3, lines 51-67).

Response to Arguments

12. Applicant's arguments with respect to claims 1-29, 44-49, 51 and 53-66 have been considered but are moot in view of the new ground(s) of rejection.

The following arguments, however, are noted.

Applicant first argues that

"Maeda is directed to a data management unit a computer system. The portion of Maeda referenced by the Examiner discloses that Figure 6 of Maeda illustrates a data table storing a data number, a data type, a data name, a number of array dimensions, an array number, and a top address of the all object data items in array elements so that these parameters correspond to each other. This portion, along with corresponding Fig. 6, however, does not disclose that this data table stores any information regarding pulses nor any information regarding pulse measurement results. Moreover, pulses are not mentioned in Maeda. Instead, the table of Fig. 6 merely stores data regarding data stored in a separate data storage unit 10.

Specifically, data storage unit 10 of Maeda is disclosed as storing data relating to a corresponding object, S1, the stored data including state data collected from the object, S1. A parameter file 11 is then created for this data that includes the data type for each data object stored in storage unit 10, its data name, the number of array elements it has, the number of array dimensions thereof and the top address of each name thereof. This parameter file is then used in the creation of data tame 14 of Fig. 6. (See, Maeda at col. 10 lines 6-27).

As such, data table 14 of Figure 6 merely stores information (e.g., name, type, etc) regarding state data stored in a separate storage unit 10. Data table 14, however, does not store any of this state data. Accordingly, Fig. 6 of Maeda does not even teach or suggest a data structure that includes any measurement data – let alone storing pulse measurement results."

The Examiner asserts that the invention of LaBarre explicitly discloses storing a plurality of measurement characteristics in a searchable array (column 9, lines 41-45 and column 12, lines 47-66) that is accessed by a user entering a particular pulse number (column 4, lines 7-11) as well as presenting the pulse characteristics in a signal pulses data table that comprises a pulse identifier identifying each pulse of the acquired signal as a relative occurrence with respect to the other pulses in the sequence in which they occur (i.e. sequential pulse numbers) and a plurality of pulse measurement results associated with each said pulse identifier (column 4, TABLEs 1 and 2). The invention of Maeda is only included to teach storing data in a memory in table form and is not included to teach any of the pulse measurement aspects already disclosed by LaBarre.

Applicant then argues:

"The Examiner cited col. 2 lines 38-46, column 11 lines 27-31, and column 12 lines 8-18, as allegedly providing a motivation to combine Maeda with LaBarre. Applicant respectfully disagrees. In particular, col 2 lines 38-46 merely discusses alleged deficiencies in prior art access programs in converting data to a different software language. It, however, does not mention anything about identifying measurement data or identifying pulse measurement data. Col. 11 lines 27-31 merely discuss the contents of the above-described data table of Fig. 6; and col. 12 lines 8-18 merely describes a mechanism of using the data table 14 of Fig. 6 in retrieving data from storage unit 10. As discussed above, data tables 14 of Maeda is directed to storing information about state data stored in separate storage unit 10. As such, nothing in Maeda suggests that it is concerned with pulse measurements,

nor a data structure storing both a unique identifier and corresponding measurement results data.

Thus, there is no motivation to combine Labarre and Maeda, let alone that they be combined in the manner concerned. And, even if they were combined, the resulting combination would fail to contain all the elements of Applicant's claimed invention. Therefore, Applicant respectfully asserts that the Section 103 rejection based on LaBarre and Maeda is improper and should be withdrawn."

The Examiner again asserts that the invention of LaBarre explicitly discloses storing a plurality of measurement characteristics in a searchable array (column 9, lines 41-45 and column 12, lines 47-66) that is accessed by a user entering a particular pulse number (column 4, lines 7-11) as well as presenting the pulse characteristics in a signal pulses data table that comprises a pulse identifier identifying each pulse of the acquired signal as a relative occurrence with respect to the other pulses in the sequence in which they occur (i.e. sequential pulse numbers) and a plurality of pulse measurement results associated with each said pulse identifier (column 4, TABLEs 1 and 2). Although one having ordinary skill in the art would recognize that it is commonly desired to store data in such table form, this feature is not explicitly taught.

It would have been obvious to one having ordinary skill in the art to include Maeda's teaching of a computer-readable storage medium comprising means for storing a plurality of types of data including identifiers for a data number, data type, data name, and associated data parameters in the form of a chart in memory (column 11, lines 27-31 and Figure 6) because Maeda suggests a well-known data structure that would present data in a clear and concise manner for easy access

and/or display by the user (column 2, lines 38-46, column 11, lines 27-31 and column 12, lines 8-18).

Applicant further argues:

"In a December 28, 2004 Office Action, the Examiner alleged that Labarre discloses measurement of a DC offset, which the Examiner stated was determined by statistical analysis. This DC offset, however, is a measurement of a single pulse (See, Labarre col. 3 lines 31-37; col. 4, lines 34-49, and Table 2). As such, Labarre does not disclose generating this DC offset using pulse measurements of a particular pulse measurement type for a plurality of pulses. As such, Applicant respectfully submits that neither Labarre nor any of the other cited references, whether taken alone or in combination teach or suggest the invention as recited in claim 66."

The Examiner asserts that this argument is considered to be moot in view of the new grounds of rejection presented above.

Conclusion

- 13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
- U.S. Patent No. 6,418,386 to Wong-Lam et al. teaches high and low voltage measurement in waveform analysis and teaches well-known max-min and histogram methods.

http://www.erg.abdn.ac.uk/users/gorry/course/phy-pages/ami.html provides the definition of "alternate mark inversion"

14. Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (703)308-1309. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703)308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)308-7382 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

jrw August 18, 2005

MARC S. HOFF SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2800